

CLAIMS:

1. A thin-film magnetic head including an inductive element and magneto-resistive effect element, wherein a first magneto-resistive effect element and a second magneto-resistive effect element are arranged in proximity to each other on a substrate, and

wherein ^{a first} ~~one~~ surface of said substrate perpendicular to ^{a given} ~~the~~ surface formed with said first magneto-resistive effect element and said second magneto-resistive effect element constitutes ~~a~~ slider surface.

2. A thin-film magnetic head according to Claim 1, wherein said first magneto-resistive effect element and said second magneto-resistive effect element each include a magneto-resistive effect film formed by being sandwiched between electrodes, and

wherein said two sets of the electrodes and said magneto-resistive effect films have substantially similar geometric shape.

3. A thin-film magnetic head according to Claim 1, wherein said first magneto-resistive effect element includes a first magneto-resistive effect film formed by being sandwiched by a lower shield and an upper shield, said first magneto-resistive effect film and said upper and lower shields being stacked on said substrate,

wherein a second magneto-resistive effect

film constituting said second magneto-resistive effect element is formed in the same plane as said first magneto-resistive effect film, and

wherein no shield is formed in the vicinity of said second magneto-resistive effect element.

4. A thin-film magnetic head according to Claim 1, wherein said first magneto-resistive effect element is used as a means for reproducing a magnetic signal from a magnetic recording medium, and

wherein said second magneto-resistive effect element is used as a means for measuring the lapping amount of said slider surface.

5. A thin-film magnetic head according to Claim 1, wherein said substrate is formed of a non-magnetic material of Al_2O_3 -TiC or SiC.

6. A thin-film magnetic head including an inductive element and magneto-resistive effect element,

wherein a first magneto-resistive effect element, a first connection terminal for detecting the magnetic resistance of said first magneto-resistive effect element, a second magneto-resistive effect element arranged in proximity to said first magneto-resistive effect element and a second connection terminal for detecting the resistance of said second magneto-resistive effect element are arranged on a substrate, and

wherein one surface of said substrate perpendicular to the surface formed with said first

magneto-resistive effect element and said second magneto-resistive effect element constitutes a slider surface.

7. A method of manufacturing a thin-film magnetic head including an inductive element and magneto-resistive effect element, comprising the steps of:

forming a plurality of first magneto-resistive effect elements and a plurality of second magneto-resistive effect elements on a substrate;

cutting said assembly into sliders each including said first magneto-resistive effect element and said second magneto-resistive effect element; and

mounting said each of said sliders on a lapping machine and lapping the surface perpendicular to said first magneto-resistive effect element and said second magneto-resistive effect element;

wherein said lapping process is carried out for each slider.

8. A method of manufacturing a thin-film magnetic head according to Claim 7,

wherein the resistance value of said second magneto-resistive effect element is detected in said lapping step, and when selected one of said resistance value and the height of said second magneto-resistive effect element as converted from said resistance value has reached a predetermined value, said lapping step is completed.

9. A method of manufacturing a thin-film magnetic head including an inductive element and magneto-resistive effect element, comprising the steps of:

forming a plurality of first magneto-resistive effect elements and a plurality of second magneto-resistive effect elements on a substrate;

cutting said assembly into sliders each including one of said first magneto-resistive effect elements and one of said second magneto-resistive effect elements; and

mounting at least one of said sliders on a lapping machine and lapping the surface perpendicular to said first magneto-resistive effect element and said second magneto-resistive effect element;

wherein the resistance value of said second magneto-resistive effect element formed for each slider is detected, and when selected one of said resistance value and the height of said second magneto-resistive effect element converted from said resistance value reaches a predetermined value, said lapping process is completed.

10. A method of manufacturing a thin-film magnetic head according to Claim 7, wherein the resistance value of said second magneto-resistive effect element is detected in said lapping step, and when selected one of said resistance value and the height of said second magneto-resistive effect element

as converted from said resistance value has reached a predetermined value, said lapping step is completed by bringing the lapped surface of said slider and the surface of the lapping stool of said lapping machine out of contact with each other.

11. A method of manufacturing a thin-film magnetic head according to Claim 9, wherein the resistance value of said second magneto-resistive effect element is detected in said lapping step, and when selected one of said resistance value and the height of said second magneto-resistive effect element as converted from said resistance value has reached a predetermined value, said lapping step is completed by bringing the lapped surface of said slider and the surface of the lapping stool of said lapping machine out of contact with each other.

12. A method of manufacturing a thin-film magnetic head according to Claim 9, wherein the resistance value of said second magneto-resistive effect element is detected in said lapping step, and when selected one of said resistance value and the height of said second magneto-resistive effect element as converted from said resistance value has reached a predetermined value, the lapping process for only a particular slider is completed.